

ABSTRACT OF THE DISCLOSURE

1
5
10
15
20
25
30

A solid-state image pickup apparatus includes an image pickup section. The image pickup section includes a color separating section having color filters assigned to three primary colors R (red), G (green) and B (blue) for separating colors of light incident from a desired scene. The color filters assigned to the color G are arranged in stripes. A plurality of photosensitive devices or cells are arranged bidimensionally in one-to-one correspondence to the color filters each for transforming light output from a particular color filter to a corresponding signal charge. A plurality of vertical transfer paths each have transfer elements vertically arranged for vertically transferring signal charges fed from the adjoining photosensitive cells. A horizontal transfer path perpendicular to the vertical transfer paths has transfer elements horizontally arranged for transferring the signal charges fed from the vertical transfer paths. Signal reading circuitry shifts the signal charges from the photosensitive cells to the vertical transfer paths. Charge sweeping circuitry sweeps out needless ones of the signal charges stored in the photosensitive cells. A mode selecting section selects, when the operation for reading the signal charges out of the image pickup section is represented by a mode, either one of an all pixel read mode for reading the signal charges from all of the photosensitive cells and a particular pixel read mode for reading only the signal charges representative of the color G. A drive signal generating section feeds horizontal and vertical drive signals to the image pickup section, and provides the horizontal drive signals with a period shorter in the particular pixel read mode than in the all pixel read mode. A controller controls the drive signal generating section in a particular manner in each of the all pixel read mode and particular pixel read mode.